



OpenGL without floating point !!

PHREDA 2024 - FORTH2020 FB GROUP



OpenGL

One Standard for GPU programming - Current version 4.6

API for rasterize triangles in 3d, near 250 system calls.

Internal numbers in floating point.

The future is Vulkan, but much more complicate



FORTH/R3

without floating point by design

connect with any DLL but only integer parameters (floating point parameters are a mess)

In early OpenGL many API call need floating point, but, newer API call not !!

The key to optimization is that it is not copying from the cpu to the gpu all the time, then, news api prefer copy chunk of memory, with floating point inside

Room for try if forth/r3 can make opengl programs



Connection with the OS

r4 version: call to api wired in interpreter and compiler

r3 version: implement dynamic library load and get procedure (idea from UEFORTH from Brad Nelson)

OpenGL api is hard to see where are the api...GLEW..GLFW ??? why

found the hook in `SDL_GL_LoadLibrary` and `SDL_GL_GetProcAddress`



transform fixed point to floating point

Bill Regsdale show a similar problem in a previous meeting

with this words I can work with fixed point and store a matrix or vector is memory like floating

ready for the demo !!